

### **REMARKS/ARGUMENTS**

This Amendment is submitted in reply to the Final Office Action dated July 24, 2007, and within the TWO MONTH period extending to September 24, 2007.

Claims 1, 4, 6-7, 9, 11, 13-14, 18, 20, and 22-23 are currently amended.

5 Claims 3, 5, 10, 12, 19, and 21 are cancelled.

Claims 1-2, 4, 6-9, 11, 13-18, 20, and 22-26 remain pending.

#### **Rejections under 35 U.S.C. 102**

10 Claims 1-3, 5-6, 8-10, 12-13, 15-19, 21-22, and 24-26 were rejected under 35 U.S.C. 102(e) as being anticipated by Chilimbi et al. ("Chilimbi" hereafter) (U.S. Patent No. 7,140,008). These rejections are traversed.

Chilimbi [7:17-19] teaches that while executing in the checking code 330 (asserted by the Office to represent the original code of claim 1), the checking phase counter value (nCheck) is decremented at every check 340-341. Chilimbi [7:5-6] teaches  
15 that checks 340-341 are placed at procedure entry and loop back edges. Therefore, Chilimbi teaches that the checking phase counter value (nCheck) is decremented at every procedure entry and loop back edge. Chilimbi [7:19-22] teaches that the checking code 330 (asserted by the Office to represent the original code of claim 1) continues to execute until the checking phase counter value (nCheck) reaches zero. Chilimbi [7:25-28] teaches  
20 that when the checking phase counter value (nCheck) reaches zero, execution of the program is transitioned to the instrumented code 320.

In view of the foregoing, it should be understood that Chilimbi teaches that the checking code 330 is executed during a countdown of the checking phase counter (nCheck), wherein the countdown of the checking phase counter (nCheck) is governed by  
25 the frequency of occurrence of procedure entries and loop back edges. Because the

frequency of occurrence of procedure entries and loop back edges is specific to the structure of the checking code 330 itself, there is no correlation between the countdown of the checking phase counter (nCheck) and a temporal countdown, i.e., elapsed time of execution.

5           Amended claim 1 recites an operation for switching execution from the original set of instructions to the instrumented version of the original set of instructions upon encountering a first trigger condition. Amended claim 1 further recites that the first trigger condition is based on an elapsed time of execution. Also, amended claim 1 recites that encountering the first trigger condition causes the switching of execution from the  
10 original set of instructions to the instrumented version of the original set of instructions to occur at a next location of known state in the original set of instructions.

          The first trigger condition of amended claim 1 is based on an elapsed TIME of execution. Therefore, the duration of execution of the original code in the method of amended claim 1 is based on an elapsed TIME of execution. As discussed above,  
15 Chilimbi teaches that the checking code 330 is executed while a checking phase counter (nCheck) is decremented to zero. Also, it should be appreciated that the decrementing of the checking phase counter (nCheck) is not based on an elapsed TIME of execution. Rather, the decrementing of the checking phase counter (nCheck) is based on the frequency of occurrence of procedure entries and loop back edges in the checking code  
20 400. Consequently, Chilimbi does not teach switching execution from an original set of instructions to an instrumented version of the original set of instructions upon encountering a first trigger condition based on an elapsed time of execution, as recited in amended claim 1.

          Also, Chilimbi does not teach switching of execution from the original set of  
25 instructions to the instrumented version of the original set of instructions at a next

location of known state in the original set of instructions, upon encountering the first trigger condition based on the elapsed time of execution, as recited in amended claim 1.

Rather, Chilimbi teaches that execution is switched from the checking code 330 to the instrumented code 320 when the checking phase counter (nCheck) reaches zero. Chilimbi

5 does not teach a concern for whether or not a known state exists in the checking code 330 before switching execution to the instrumented code 320 when the checking phase counter (nCheck) reaches zero.

Chilimbi [7:33-36] teaches that while executing in the instrumented code 320, the profiling phase counter value (nlnstr) is decremented at every check 340-341. Chilimbi

10 [7:5-6] teaches that checks 340-341 are placed at procedure entry and loop back edges.

Therefore, Chilimbi teaches that the profiling phase counter value (nlnstr) is decremented at every procedure entry and loop back edge. Chilimbi [7:36-39] teaches that the instrumented code 320 continues to execute until the profiling phase counter value (nlnstr) reaches zero. Chilimbi [7:41-44] teaches that when the profiling phase counter

15 value (nlnstr) reaches zero, execution of the program is transitioned to the checking code 330.

In view of the foregoing, it should be understood that Chilimbi teaches that the instrumented code 320 is executed during a countdown of the profiling phase counter (nlnstr), wherein the countdown of the profiling phase counter (nlnstr) is governed by the  
20 frequency of occurrence of procedure entries and loop back edges. Because the frequency of occurrence of procedure entries and loop back edges is specific to the structure of the instrumented code 320 itself, there is no correlation between the countdown of the profiling phase counter (nlnstr) and a temporal countdown, i.e., elapsed time of execution.

Amended claim 1 recites an operation for switching execution from the instrumented version of the original set of instructions back to the original set of instructions upon encountering a second trigger condition. Amended claim 1 further recites that the second trigger condition is based on an elapsed time of execution. Also, amended claim 1 recites that encountering the second trigger condition causes the switching of execution from the instrumented version of the original set of instructions back to the original set of instructions to occur at a next location of known state in the instrumented version of the original set of instructions.

The second trigger condition of amended claim 1 is based on an elapsed TIME of execution. Therefore, the duration of execution of the instrumented version of the original code in the method of amended claim 1 is based on an elapsed TIME of execution. As discussed above, Chilimbi teaches that the instrumented code 320 is executed while a profiling phase counter (nlnstr) is decremented to zero. Also, it should be appreciated that the decrementing of the profiling phase counter (nlnstr) is not based on an elapsed TIME of execution. Rather, the decrementing of the profiling phase counter (nlnstr) is based on the frequency of occurrence of procedure entries and loop back edges in the instrumented code 320. Consequently, Chilimbi does not teach switching execution from an instrumented version of an original set of instructions back to the original set of instructions upon encountering a second trigger condition based on an elapsed time of execution, as recited in amended claim 1.

Also, Chilimbi does not teach switching of execution from the instrumented version of the original set of instructions back to the original set of instructions at a next location of known state in the instrumented version of the original set of instructions, upon encountering the second trigger condition based on the elapsed time of execution, as recited in amended claim 1. Rather, Chilimbi teaches that execution is switched from the

instrumented code 320 to the checking code 330 when the profiling phase counter (nlustr) reaches zero. Chilimbi does not teach a concern for whether or not a known state exists in the instrumented code 320 before switching execution to the checking code 330 when the profiling phase counter (nlustr) reaches zero.

5           For a claim to be anticipated under 35 U.S.C. 102, each and every feature of the claim must be taught by a single prior art reference. As discussed above, the Applicant submits that Chilimbi does not teach each and every feature of amended claim 1. Therefore, the Applicant submits that amended claim 1 is not anticipated by Chilimbi under 35 U.S.C. 102. Therefore, the Office is requested to withdraw the rejection of  
10   amended claim 1 under 35 U.S.C. 102.

Each of amended claims 9 and 18 recites an operation for switching execution from the original code to an instrumented code upon reaching a next location of known state in the original code after having executed the original code for a specified first time  
15   period. Each of amended claims 9 and 18 also recites an operation for switching execution from the instrumented code back to the original code upon reaching a next location of known state in the instrumented code after having executed the instrumented code for a specified second time period.

The Applicant submits that the arguments presented above with regard to the  
20   deficiencies in the teachings of Chilimbi concerning the features of amended claim 1 are equally applicable to the above-identified features of each of amended claims 9 and 18. Thus, Chilimbi fails to teach each and every feature of amended claims 9 and 18 as required for anticipation under 35 U.S.C. 102. Therefore, the Office is requested to withdraw the rejections of amended claims 9 and 18 under 35 U.S.C. 102.

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Because a dependent claim incorporates each and every feature of its independent claim, the dependent claim is patentable for at least the same reasons as its independent claim. Therefore, each of dependent claims 2, 6, 8, 13, 15-17, 22, and 24-26 is patentable for at least the same reasons provided for its independent claim. The Office is requested to withdraw the rejections of dependent claims 2, 6, 8, 13, 15-17, 22, and 24-26 under 35 U.S.C. 102.

The Office is requested to note that dependent claims 3, 5, 10, 12, 19, and 21 have been cancelled.

#### **Rejections under 35 U.S.C. 103**

Claims 4, 7, 11, 14, 20, and 23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chilimbi in view of Marcuello et al. ("Marcuello" hereafter) (U.S. Patent Application Publication No. 2004/0154010). These rejections are traversed.

Because a dependent claim incorporates each and every feature of its independent claim, the dependent claim is patentable for at least the same reasons as its independent claim. Therefore, each of dependent claims 4, 7, 11, 14, 20, and 23 is patentable for at least the same reasons provided for its independent claim. The Office is requested to withdraw the rejections of dependent claims 4, 7, 11, 14, 20, and 23 under 35 U.S.C. 103.

The Applicant submits that all of the pending claims are in condition for allowance. Therefore, a Notice of Allowance is requested. If the Examiner has any questions concerning the present Amendment, the Examiner is requested to contact the undersigned at (408) 774-6914. If any additional fees are due in connection with filing this Amendment, the Commissioner is authorized to charge Deposit Account No. 50-0805 (Order No. SUNMP357). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,  
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